MARIJUANA
A Medicinal Marvel?

Cannabis, or marijuana, has proven medical benefits and few, if any, toxic side-effects.

Why, then, has it been a prohibited medicine for over fifty years?

Dr Lester Grinspoon
interviewed by
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Medicinal cannabis, also known as medical marijuana, is beginning to receive attention worldwide. Unfortunately, scare tactics and misinformation surrounding the international 'war on drugs' continue to dominate in the political and medical arenas, leaving many unwilling or unable to think for themselves. Despite this, more people are discovering the ability of marijuana, or cannabis, to relieve symptoms surrounding many medical conditions.

One of the pioneers of medicinal cannabis research is Dr Lester Grinspoon, a professor at Harvard Medical School. In the last 30 years Dr Grinspoon has researched and written many articles along with two books on the cannabis controversy. **Marihuana Reconsidered** ***and*** **Marihuana, The Forbidden Medicine** ***introduced many to the positive uses and benefits of one of the oldest cultivated plants in the world.***

In this interview with Dr Grinspoon, many topics are discussed concerning the role of medicinal cannabis use in today's society.

J. Ray: What got you interested in marijuana/cannabis?

Dr Grinspoon: In 1967, I had some unexpected time so I thought I would look into marijuana to see what all the fuss was about. I was convinced at the time that marijuana was a terribly dangerous drug. I didn't understand why young people were ignoring the government's warnings about its danger in using it. So, I spent the next three years doing research and looking into it. I learned I had been brainwashed just like so many other citizens in the United States.

While marijuana is not harmless, it is so much less harmful than alcohol or tobacco that the only sensible way to deal with it is to make it legally available in a controlled system. We can see this with alcohol which is legally available to people over the age of 21 in the United States. I put all this together in a book called *Marihuana Reconsidered*. It was published in 1971 by Harvard University Press and was quite controversial at the time. It has just been republished as a classic with a new introduction, 25 years later.

JR: In your research you found marijuana/cannabis to be less harmful than tobacco or alcohol?

Dr G: I think cannabis is not harmless. There is no such thing as a harmless drug. Cannabis is, by any criterion, less harmful than either alcohol or tobacco. For example, tobacco costs the US about 425,000 lives every year; alcohol, perhaps 100,000 to 150,000 lives, not to speak of all the other problems caused by alcohol use. With cannabis there has not been a single case of a documented death due to its use. Now, of course, death is not the only toxicity. It is the most profound one and certainly a permanent one. If you look at it from the point of view of other toxicities, again it comes out much better than either alcohol or tobacco. In fact, the subject of our latest book, *Marihuana, The Forbidden Medicine*, looks at cannabis from the point of view of a medicine. When cannabis regains the place it once had in the US Pharmacopoeia it will be among the least toxic substances in that whole compendium.

JR: It was in the US *Pharmacopoeia* in the early 1900s?

Dr G: That is correct. Cannabis was a very much used drug up until 1941 when it was dropped from the US *Pharmacopoeia*. This was after the passage of the first of the draconian US anti-marijuana laws in 1937, the *Marihuana Tax Act*. This Act made it so difficult for physicians to prescribe cannabis that they just stopped using it.

JR: Cannabinoid receptors were recently discovered in the human brain. Are these cannabinoid receptors related to cannabis and its medical uses?

Dr G: Very definitely. Some years ago it was discovered by Dr Solomon Snyder that there are endogenous opioids; that is to say, substances like opium that we produce in our

bodies. It followed from that, that there would be opioid receptors in our brains. It wasn't long afterwards that a woman named Candace Pert discovered this. In other words, if you consider a receptor as a kind of keyhole and the ligand or the neurotransmitter as the key that opens it, the key has to fit into that receptor to open it.

With cannabis it came about the other way: the receptor sites for cannabis were discovered first. I believe this was in 1990. From this it was implied that there had to be an endogenous cannabinoid, a ligand that would turn this receptor site on. Indeed, a couple of years later, a man named W. A. Devane and his group discovered this ligand and they gave it the name "anandamide", after the Sanskrit word *ananda*, which means "bliss". Now there are many studies of these receptors and anandamide. It is clear that these receptors are not just located in the brain but in various other organs in the body as well.

I think we are going to see in the future that these receptors play a very important part in the medicinal utility of cannabis. Right now the clinical evidence is empirical and anecdotal but, in my view, powerful enough to be translated into a policy which would allow people to use cannabis legally for medicinal purposes.

JR: Do these recent discoveries contradict past research that warned of brain damage from cannabis use?

Dr G: In my view, that kind of thing is in the realm of myth and misinformation about cannabis. Think about it for a minute. If the brain produces its own cannabinoid-like substances, it doesn't make much sense that it would produce a substance which is going to damage the brain. Indeed, long before it was discovered that there are endogenous cannabinoids, the empirical evidence did not demonstrate that cannabis damaged the brain.

There are a few studies which were methodically unsound that the US Government and, specifically, NIDA, the National Institute of Drug Abuse, and the DEA, the Drug Enforcement Administration, focus on.

JR: Can you tell me something about the US Drug Enforcement Administration, the DEA?

Dr G: The predecessor agency of the DEA, the Federal Bureau of Narcotics, was organised in 1930 by a man named Anslinger. Anslinger undertook what he called a "great educational campaign", which actually turned out to be a great disinformational campaign. This is symbolised by one of the flagships of that campaign: the movie, *Reefer Madness*. If you see the movie *Reefer Madness* today, even a person who is not very sophisticated about marijuana will laugh at the grossness of the exaggerations dramatised in that movie.

JR: Do you think pharmaceutical drug companies have anything to do with the government's prohibitive stand against medicinal cannabis use?

Dr G: Absolutely. The Partnership for a Drug Free America has a budget of about a million dollars a day. A lot of that money comes from drug companies and distilleries. You see, these companies and distilleries have something to lose—the distilleries for obvious reasons. The drug companies are not interested in marijuana as a medicine because the plant cannot be patented. If you can't patent it, you can't make money on it. Their only interest is a negative one. It will eventually displace some of their pharmaceutical products.

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Imagine a patient who requires cancer chemotherapy. Now he can take the best of the anti-nausea drugs, which would be ondansetron. He would pay about US$35 or $40 per 8-milligram pill and would then take three or four of them for a treatment. Normally, he would take it orally, but people with that kind of nausea often can't, so he would take it intravenously. The cost of one treatment for that begins at US$600 because he will need a hospital bed, etc. Or he can smoke perhaps half of a marijuana cigarette and receive relief from the nausea.

Currently, marijuana on the streets is very expensive. One can pay from US$200 to $600 an ounce. This is what I call the prohibition tariff. When marijuana is available as a medicine, the cost would be significantly less than other medications; it would cost about US$20 to $30 an ounce. You can't tax it in the US because it is a medicine. So that would translate out to maybe about 30 cents for a marijuana cigarette.

So our chemotherapy patient could get, many people believe, better relief from the marijuana cigarette for 30 cents. This, in comparison to the ondansetron which would cost at the very least US$160 a day and, if he had to take it intravenously, more than US$600 per treatment.

Well, if you multiply that by all of the symptoms and syndromes we discuss in the book, *Marihuana, The Forbidden Medicine*,

then you can see that the drug companies will have something to lose here.

JR: Do you see this as a big obstacle in changing drug policy here in North America?

Dr G: Well, it is certainly playing a part. It is indirectly playing a part in the Partnership for a Drug Free America ads. To say they are inaccurate is an understatement.

JR: Are we also talking about DARE, the Drug Abuse Resistance Education program we see in many schools at this time?

Dr G: Oh yes, that is a terrible program. Again, it is miseducating children about drugs. It has now been established in a major study that it doesn't do a bit of good. We're all worried about youngsters doing drugs, but now DARE has been demonstrated not to do any good.

JR: In your book, *Marihuana, The Forbidden Medicine*, there are many references to the medicinal uses of cannabis. What are some of the medical problems you have seen medicinal cannabis help?

Dr G: The most common cancer treatment in the last couple of decades is with the cancer chemotherapeutic substances. A big problem with some of these is the severe nausea and vomiting. It is the kind of nausea that anybody who has not experienced it can only imagine. It is very important that this nausea be defeated so patients can be reasonably comfortable with this treatment. As I have mentioned, there are conventional drugs available; it is just that cannabis is often the best.

Then there is glaucoma which is a disorder of increased intraocular pressure in the eyes. If that pressure is not brought down, glaucoma can eventually lead to blindness. There are conventional medicines that work pretty well; but, for some people, cannabis works better and with fewer side-effects.

Epilepsy is a disorder which has been treated by cannabis for centuries. About 25 per cent of people in the US who have various forms of epilepsy don't get good relief from the conventional medicines. Many of them do get relief from one of the oldest anti-epileptic medicines, cannabis.

Multiple sclerosis affects more than two million people in the US, and one of its distressing symptoms is muscle spasm. It is very painful. Anybody who has had a cramp while swimming will know what muscle spasm pain is all about. Cannabis is very effective for the muscle spasms of not only multiple sclerosis but also of paraplegia and quadriplegia.

Furthermore, cannabis helps people with MS who may have trouble controlling their bladders. Cannabis is very helpful in reducing this kind of loss of control. Not long ago I was in London doing a TV debate on the topic of medicinal cannabis use. There was a woman in the audience who said she had come down from Leeds, two-and-a-half hours on the train, to be in the television audience. She has MS. The part that was so distressing for her was the social embarrassment of losing control over her bladder. Well, she said cannabis has restored her bladder control and she could now make the two-and-a-half-hour trip from Leeds with no trouble.

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Cannabis has been used for centuries in the treatment of various kinds of chronic pain. It was used on the battlefields of the Civil War as an analgesic medicine until morphine displaced it. Morphine was much quicker for the pain and a much more powerful pain-reliever than cannabis. Cannabis cannot defeat very powerful pain. The price of using morphine was that many people suffered from what was then called "soldier's disease", which was addiction to morphine.

Cannabis is very useful in the treatment of migraine headaches. Sir William Osler, in his last textbook on medicine, describes cannabis as the best single medicine for the treatment of the pain of migraine.

The list is longer than that but I don't think you want me to go on and on about this. One of the amazing things about cannabis is its versatility. It has many uses. It is also remarkably non-toxic and it will be quite inexpensive when it is not a prohibited substance. In my opinion, cannabis will be seen as a wonder drug of the 1990s, much as penicillin was in the 1940s.

JR: In your first book on cannabis, *Marihuana Reconsidered*, you mentioned that the international drug-control treaties, specifically the United Nations Single Convention on Narcotic Drugs, were not a serious obstacle to the legalisation of cannabis. Do you still go along with this?

Dr G: There is no question about it. There is no serious obstacle. Treaties can be changed and I think the push to do that will come from Europe. The interest in this is growing much more rapidly in Europe than in the US. In fact, there is so much new information regarding medicinal cannabis use that Yale University Press has asked us for a second edition of *Marihuana, The Forbidden Medicine*. This book has been translated into 10 languages, including Japanese.

Late in 1995 we received a letter from our German publisher congratulating us on our seventh printing. They said our book has begun a "robust debate on the medicinal use of marijuana in Germany". So, the Europeans are way ahead of us, and I think the pressure will probably come from them to make the necessary legal changes so cannabis can be used as a medicine without interference. The present situation is just awful. These poor people who use it as a medicine already have some degree of anxiety regarding their disease. Another layer of anxiety is imposed on them by their government; namely, they might get arrested or have their homes confiscated because they use cannabis as a medicine.

JR: Do you think these international treaties are what keep the 'war on drugs' alive?

Dr G: I think the Single Convention is not a big obstacle, frankly. I think lots of people use that as an excuse, that we can't do anything because of the Single Convention. I'm not an expert on it, but the international lawyers I've talked to say this is not the problem. I think the war on drugs is a much bigger thing than our discussion of medicinal cannabis use. The 'war on drugs' is a much more complicated problem. If we stick to the narrow agenda of medicinal cannabis use, I think putting pressure on our gov-

ernment representatives and other people in powerful positions is the way.

People are learning about cannabis as a medicine. Anybody who knows a person with AIDS who is dealing with the wasting syndrome probably knows someone who has discovered that cannabis not only retards his weight-loss but maybe helps him to regain weight. People who know patients with multiple sclerosis, migraine, glaucoma who are using cannabis, begin to see that it is a very useful medicine and they begin to wonder what all the fuss is about. So I think people are getting educated.

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The other thing that is happening that I think is very hopeful is that *doctors* are getting educated. You see, doctors usually get their drug education from drug companies or from pharmaceutical company sales people who go around to doctors' offices, as well as from journal articles, advertisements and promotional campaigns from these drug companies. There are no drug companies interested in cannabis, so doctors don't learn much about it. In my view, doctors have not only been miseducated like so many other people, but they have also been agents of that miseducation. What is happening now is doctors are learning from patients. This is a new way for doctors to learn about a new medicine. They learn lots of things from their patients, but generally not about new medicines.

An example of this would be an AIDS patient who started using cannabis for his wasting syndrome. Imagine him going into his doctor's office and getting on the scales. The doctor knows he's been losing weight all along and nothing that the doctor has given him has helped. Suddenly, the doctor sees his patient has gained weight since the last visit and he asks, "What's going on?" The patient says, "It is the cannabis I've been smoking: it has helped me put on some weight." This makes a powerful impression on a doctor who has been struggling to help his patient gain weight. Once this happens to a doctor, his attitude begins to change.

JR: How can the average person work for changes in the drug laws?

Dr G: Well, right now in the US, Congressman Barney Frank of Massachusetts has introduced a bill to do just this; to make it possible for people to use cannabis as a medicine. He needs co-sponsorship and support for this bill. People who are interested in this can contact Barney Frank or even their own representatives and ask them to support HR 2618, the Bill for medical cannabis use for those in medical need.

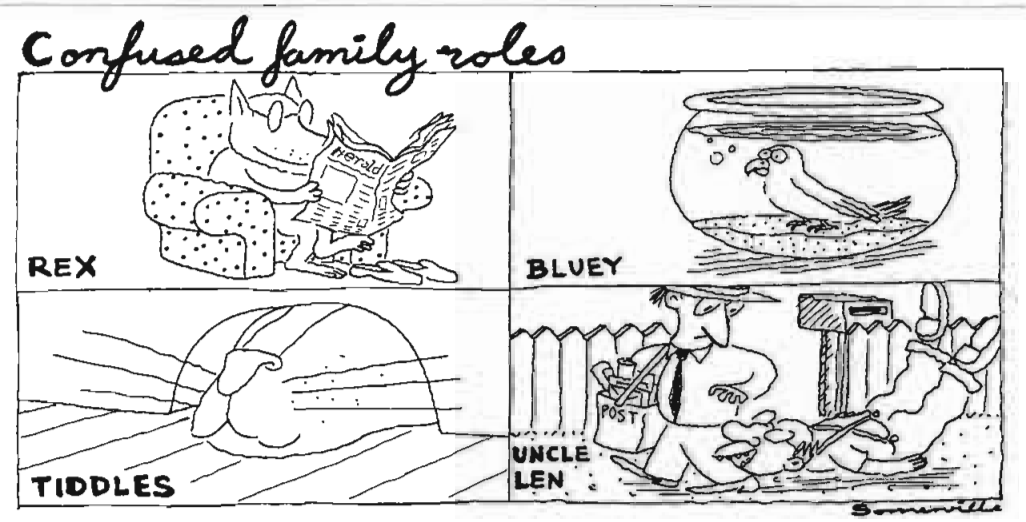
JR: Is this a similar bill to what Newt Gingrich and others had introduced into Congress in the early 1980s?

Dr G: It's the same bill. It is the McKinney bill. I had suggested to Congressman Frank to expand the number of symptoms and syndromes for which cannabis can be used. We know more about it than we did in 1982, but it is the same bill. Gingrich supported it then, but not now.

JR: In February 1994 you and James Bakalar wrote, "The War on Drugs: A Peace Proposal", published in *The New England Journal of Medicine*. In it you talk about harm-reduction strategies in the Netherlands and other countries. What do you think is holding back these governments in North America from making the changes necessary for a truce in the drug war, specifically in regards to medicinal cannabis use?

Dr G: Unfortunately, it is attitudes and fears that are unwarranted. Take one harm-reduction approach; namely, clean needles. Now, we've been saying for years that clean needles will reduce the spread of AIDS among drug users. The IV drug users are the group spreading it the most. There are people who are afraid of needle-exchange programs because they think it will cause an increase in the use of intravenous drugs. I would say this has been going on now for four or five years. Now the data is overwhelming. It clearly demonstrates that exchanging needles does cut down the spread of AIDS and it does *not* cause an increase in the use of these drugs. It is so convincing that some local municipalities have gone ahead with needle exchanges, but the Federal government and President Clinton are all dead set against it. We could have saved a lot of people from AIDS by instituting this policy of clean needles early on. Even now we are dragging our feet because of this misapprehension about giving needles out. Ignorance and fear are not always corrected by data. The data on needle exchange is compelling whether it's from Australia, New Haven or wherever. There is no question. You would think when you have this kind of data it would be translated into social policy, considering the cost of AIDS in human suffering. But we're having an awful tough time persuading the authorities that we should go full steam ahead with needle exchange.

There is an attitude here in the US that the only way to treat anyone using a drug not approved of



is to treat them as a criminal. Many of these people even go to jail. The costs of criminalising these people have been extreme. Since I started my work on marijuana in 1967, more than 10 million Americans have been arrested on marijuana charges in the US. In 1994, the year for which we have the latest FBI data on this, 483,000 Americans were arrested on marijuana charges. That is just extraordinary when you consider that cannabis imposes less harm on the individual and on society than either alcohol or tobacco.

JR: What kind of feedback did you receive from your June 1995 article, "Marihuana as Medicine", in *JAMA*?

Dr G: Well, that article caused a lot of fuss. It was published in the *Journal of the American Medical Association* (*JAMA*). This organisation has been steadfast in its opposition to marijuana for 50 years—since an editorial published in 1945. Although the AMA doesn't say so officially, I think publishing our article signals a growing change in physicians' attitudes towards medicinal cannabis. There were physicians who wrote me nasty letters. More impressive were the many physicians who shared their stories about how they learned about cannabis from seeing how it helped a particular patient. Several of them said we ought to have an organisation, a physicians' organisation, for the medical use of marijuana. The article created a stir not just in this country. I think *JAMA* is published in 33 languages. It was no small wonder that there was a lot of mail from other parts of the world as well.

JR: Was the feedback mostly positive?

Dr G: Absolutely. By far, most of it was positive. There were some nasty letters, but I have received those from the time I first published *Marihuana Reconsidered*. The first letter I received was a very nasty letter. As the years go on, though, the mail gets much more positive.

JR: What do you see for the future of medicinal cannabis use?

Dr G: It strikes me that there are a lot of parallels with the discovery of penicillin. Penicillin was discovered by a man named Alexander Fleming in 1928. He had gone off for summer vacation and left a Petri dish out in his laboratory. When he came back, the Petri dish was just covered with *Staphylococcus*, except for an area surrounding what looked like a little island of mould. He looked into it and found that the mould was giving off a substance which he called "penicillin". It was killing the *Staphylococcus*. Yet his discovery was ignored until 1941. For over a decade his publication was ignored, until the pressure of World War II highlighted the need for antibacterial substances other than sulphonamides. Then a couple of investigators did a study with just six patients and demonstrated it was a good antibiotic.

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Penicillin became very inexpensive to produce. It was clear that penicillin was not toxic and it was very versatile as a drug. It was used in the treatment of many different kinds of infectious diseases. It became the wonder drug of the 1940s.

When cannabis can be produced as a medicine it will be very inexpensive. I have already listed some of the reasons why it can be said to be versatile, and, the government position notwithstanding, it is remarkably non-toxic. It has exactly the same three characteristics that made penicillin a wonder drug. These are some of the reasons I believe that, in the late 1990s, cannabis is going to be recognised as a wonder drug. ∞

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For more information on the DARE school programs, here is a list of articles and world wide web addresses:

- Harmon, Michele Alicia, "Reducing the Risk of Drug Involvement Among Early Adolescents: An Evaluation of Drug Abuse Resistance Education (DARE)", Institute of Criminal Justice and Criminology, University of Maryland, College Park, MD 20742, USA, April 1993.
  Web address: http://turnpike.net/~jnr/dareeval.htm
- "Studies Find Drug Program Not Effective", *USA Today*, 11 October 1993. See web site: http://turnpike.net/~jnr/dareart.htm.
- "A Different Look at DARE", Drug Reform Coordination Network Topics, in-depth series. Web site address: http://drcnet.org/DARE.

About the Interviewee:

Dr Lester Grinspoon is an Associate Professor of Psychiatry at the Harvard Medical School. He has published over 140 papers and 12 books. His major area of interest has been 'illicit' drugs. His first book, *Marihuana Reconsidered*, was published in 1971 by Harvard University Press and republished in 1994 as a classic. He has written books on amphetamines, cocaine and psychedelic drugs. In 1990 he won the Alfred R. Lindesmith Award of the Drug Policy Foundation for "Achievement in the field of drug scholarship". *Marihuana, The Forbidden Medicine*, Dr Grinspoon's latest book, written with James Bakalar, has been translated into 10 languages. A second edition is now in press.

[Copies of *Marihuana, The Forbidden Medicine*, can be ordered from the Publicity Department, Yale University Press, New Haven, Connecticut, USA, phone +1 (203) 432 0971.]

About the Interviewer:

Jana Ray is a freelance writer and community radio personality who works to educate the public about humane alternatives to the global war on drugs. Harm-reduction strategies, legal medicinal cannabis use, drug law reform and the preservation of everyone's human rights are fundamental principles guiding her work.

Since 1992, Jana has been an active member of the British Columbia Anti-Prohibition League which represents various west Canadian groups. BCAPL advocates public/government recognition of the individual's natural, human and legal right to determine personally his/her own religion, lifestyle and consumption.